

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A purified retroviral envelope polypeptide, capable of mediating infection of a cell by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus of the NIH Swiss inbred NFS/N mouse for entry, and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus.

2. - 3. (Cancelled)

4. (Currently amended) A purified retroviral envelope polypeptide comprising an amino acid sequence which is at least 94% identical to the amino acid sequence shown in SEQ ID NO: 2, or a fragment of said amino acid sequence that is at least 94% identical to the sequence shown in SEQ ID NO: 2, wherein said polypeptide is

a) capable of mediating infection of a cell by use of the polytropic/xenotropic receptor encoded by the Rmc1 locus of the NIH Swiss inbred NFS/N mouse for entry and unable of mediating infection of a cell by use of a human polytropic/xenotropic receptor encoded by the human RMC1 locus or

b) capable of mediating infection of a human cell and wherein said polypeptide includes at least one substitution in the VR3 region.

5. (Cancelled)

6. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~5~~, wherein said mutation is at position 212 in SEQ ID NO: 2.

7. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~5 or 6~~, wherein said at least one substitution alters the host tropism of a virus or an infectious particle comprising said polypeptide.

8. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~any of claims 5-7~~, wherein said purified polypeptide is a murine retroviral envelope polypeptide capable of mediating infection of a human cell.

9. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~any of claims 5 to 8~~, wherein said mutation at position 212 in SEQ ID: 2 results in a methionine.

10. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~any of claims 5-9~~ capable of mediating a higher infectivity in human cells than MCF-247, MCF-13 and X-MLV (NZB) viruses.

11. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~any of claims 1-10~~, further comprising an inserted non-viral sequence capable of redirecting the target cell specificity, by the resultant chimeric envelope.

12. (Original) A purified retroviral envelope polypeptide according to claim 11, wherein the chimeric envelope further contains secondary mutations, enabling activation of the fusiogenic properties of said chimeric envelope, by binding to the receptor target.

13. (Currently amended) A purified retroviral envelope polypeptide according to ~~any of claims 11 and 12~~, wherein said inserted sequence is a single chain antibody.

14. (Currently amended) A purified retroviral envelope polypeptide according to claim 4 ~~any of claims 1-13~~, further comprising a chemical modification of said envelope.

15. (Original) A purified retroviral envelope polypeptide according to claim 14, wherein said chemical modification enhances and/or alters the host tropism.

16. (Currently amended) A recombinant mammalian cell displaying an envelope polypeptide according to claim 4 ~~any of claims 1-15~~.

17. (Currently amended) An isolated nucleic acid sequence encoding any of the envelope polypeptides according to claim 4 ~~any of claims 4-15~~.

18. (Original) An isolated nucleic acid sequence as shown in SEQ ID NO: 1

19. (Currently amended) A vector recombinant mammalian expression vector comprising a purified envelope polypeptide according to ~~claims 1-4 and/or 11-15~~ 4, wherein said vector is a recombinant mammalian expression vector or a retroviral expression vector.

20. (Cancelled)

21. (Currently amended) A replication competent retrovirus, comprising a purified envelope polypeptide according to claim 4, wherein said polypeptide is capable of mediating infection of a human cell and wherein said polypeptide includes at least one substitution in the VR3 region. ~~any of claims 5-10 and/or 11-15.~~

22. (Currently amended) A replication competent retrovirus comprising ~~a purified~~ an envelope polypeptide according to claim 4 to ~~any of claims 1 to 10 and/or 11 to 15~~ and further comprising a heterologous translation cassette.

23. (Cancelled)

24. (Currently amended) A ~~vector~~ retrovirus according to ~~claim 23~~ claim 22, wherein said heterologous translation cassette consists of an IRES-gene element.

25. - 26. (Cancelled)

27. (Currently amended) A vector according to claim 19 ~~or 20 or 24-25~~, further comprising at least one heterologous gene to be expressed.

28. (Currently amended) A vector according to claim 26, wherein expression of the envelope is directed by an IRES-element.

29. (Currently amended) A packaging cell construct comprising a recombinant mammalian expression vector comprising a nucleic acid coding for a purified envelope polypeptide according to ~~any of claims 1-15~~ claim 4, and a non-viral or viral promoter and poly-adenylation signals.

30. (Currently amended) A method for Use of a vector according to any of claims 19-20 and/or 28 for the generation of a packaging cell said method comprising use of a vector according to claim 19.

31. (Currently amended) A method Use of a vector according to any of claims 24-27, for expression of a polypeptide in a cell constitutively expressing the gag/pol genes of simple retroviruses said method comprising use of a vector according to claim 19.

32. (Currently amended) A method Use of a packaging cell according to any of claims 28-30 for the preparation of a composition for the modification of a cell said method comprising use of a packaging cell according to claim 29.

33. (Currently amended) A method Use of a vector according to claims 22 and/or 23, for the preparation of a

composition for the modification of a cell said method
comprising use of a virus according to claim 22.

34. (Cancelled)

35. (Currently amended) Method according to claim 39
~~Use of a virus or vector according to claim 33, wherein said~~
rodent constitutively express the gag/pol genes of simple
retroviruses.

36. (Currently amended) Method according to claim 39
~~Use of a virus or vector according to claim 33, wherein said~~
rodent express the gag/pol genes of simple retroviruses in a
tissue specific manner.

37. (Currently amended) Method according to claim 39
~~Use of a virus or vector according to claim 33, wherein said~~
rodent expression of the gag/pol genes of simple retroviruses
is developmentally regulated.

38. (Cancelled)

39. (Currently amended) A method for gene discovery
comprising

a) ~~using a virus or vector according to any of claims 19-~~
~~27 or a replication competent retrovirus comprising an~~

~~envelope polypeptide according to any of claims 1 to 4~~
~~and/or 11 to 15; providing~~

- i) a recombinant mammalian expression vector; or
- ii) a replication competent retrovirus; or
- iii) a retroviral expression vector

wherein said vector or virus comprises a purified
envelope polypeptide according to claim 4;

- b) infecting a new-born rodent with said virus or vector
- c) inducing a tumour by means of said virus or vector
- d) isolating said tumour in said rodent
- e) identifying a gene involved in the oncogenesis by cloning the integration site of said virus or vector in said tumour.

40. (Original) A method according to claim 39 for gene discovery of a cancer related gene.

41. (Cancelled)